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AUTHOR	Sheets, Rick A.
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ABSTRACT

This study examines the impact of tutor training on the efficacy of adult peer tutors in colleges and universities. The author argues that many institutions hire tutors based on their GPAs, and do not train them to be tutors. For the college programs that do provide training, little research exists which identifies what topics should be included, what presentation format is best, or what kind of teaching method works best for tutor training. This study presents four research questions: (1) Does tutor training affect a tutor's ability to identify an appropriate course of action for a student? (2) Does tutoring experience affect a tutor's ability to identify an appropriate course of action? (3) What other factors contribute to a tutor's ability to identify an appropriate course of action? and (4) What are the relationships between the tutor's abilities to identify an appropriate course of action and their abilities to construct this course of action? Chapter 1 presents a background and statement of the problem, purpose and importance of the study, research questions, definition of terms, and organization. Chapter 2 synthesizes the literature reviewed. Chapter 3 covers hypotheses and methodologies used. Chapter 4 offers descriptive data of the sample, statistical analysis of the hypothesis, and an exploration of appropriate courses of action. Chapter 5 summarizes, states conclusions, and discusses recommendations. (NB)

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ED 474 187

THE EFFECTS OF TRAINING AND EXPERIENCE ON ADULT PEER TUTORS IN COMMUNITY COLLEGES

by

Rick A. Sheets

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A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

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ABSTRACT

The purpose of this study was to investigate the effects of training and experience on tutors. Constructivism and metacognition laid the theoretical foundation for the need, the process, and the outcomes for tutor training. The investigation followed a field study design. Variables were not manipulated; instead, existing variables and interventions were investigated. Four research questions guided the study.

1. Does tutor training affect a tutor's ability to identify an appropriate course of action with a student?
2. Does tutoring experience affect a tutor's ability to identify an appropriate course of action with a student?

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3. What other factors contribute to a tutor's ability to identify an appropriate course of action with a student?
4. What are the relationships between the tutors' abilities to identify an appropriate course of action and their abilities to construct an appropriate course of action?

Two researcher-created instruments were developed for the study. Twenty local and national experts in the field identified the appropriateness of tutor responses on the instruments.

Ten or more hours of training was found to make a significant difference in the appropriateness of tutor responses to presented tutoring situations on the total score. "Active listening and paraphrasing" was the one topic investigated in which one or more hours of training made a significant difference in the appropriateness of tutor responses on a sub-test score.

There were no significant differences found in the total score nor sub-test scores among groups based on reported tutoring experience which was acquired during the study.

Four "other" factors also significantly affected the total post-test scores. From the pre-test, two variables had a positive effect: 1) amount of prior related work experience, and 2) the category of "other" as a "Reason for becoming a tutor." From the post-test, two variables when valued by tutors as "Perceived rewards of being a tutor" had a negative effect: 1) "Making money" and 2) "Giving something back."

Recommendations were presented 1) for practitioners in the field, and 2) for professionals interested in pursuing additional research to exceed the scope and findings of this study.

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Dedicated to my family:

my wife, Barbara

my parents, Dick and Carolyn

my brother, Greg

and my grandparents,

Martha and Cecil Sheets & Clara and Bob Briney

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No study of this nature and complexity can be accomplished without the help, support, and cooperation of many others. My list of acknowledgments begins with the eternal patience and guidance of my committee chair,

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CHAPTER I

INTRODUCTION

Background

The need for students to receive tutoring to succeed in institutions of higher learning was evident in America when Harvard opened its doors in 1636 as America's first college. Because many of its incoming students were not yet proficient in Latin, Harvard provided tutors to help these students acquire the proficiency needed to succeed (Van, 1992). "Underpreparedness" for college in other academic areas is also not a new phenomenon in higher education in America. In 1907, over half of the beginning students at Yale, Harvard, Princeton, and Columbia failed to meet entrance requirements (Maxwell, 1979). Since the 1960s, as increasing numbers of non-traditional and underprepared students entered colleges and universities, the need to provide tutoring and other support services for students has continued.

Most American colleges and universities today offer some form of peer tutoring to some of their adult students through student services, special services, individual departments, or learning assistance programs. Today, adult peer tutoring is generally recognized as a service, which provides more than equalizing the opportunity for success among specific disadvantaged populations. It is also recognized as a service for providing support to all students to help them increase the efficiency and effectiveness of their efforts in studying and meeting their educational goals (Maxwell, 1990a).

Roueche (1983), in her national study on elements of success in institutions of higher education, stated that one of the components of the success of basic skill development programs for colleges and universities was the use of peer tutors. For this investigation, peer tutors are defined as adult

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tutors who are generally close in class standing to the students with whom they work. Furthermore, in Maxwell's (1990a) review of the literature on tutoring, she identified several studies that supported the use of adult peer tutors for college students. In those studies, students responded more positively to tutors who were closer in class standing (not necessarily in age) than to professional tutors who were farther removed from the class standing of the college student (e.g., freshman). Maxwell also identified training for peer tutors as an essential element for successful tutoring programs in colleges and universities. In 1992, the National Center for Developmental Education at Appalachian State University completed a follow-up study of over 6000 students enrolled in basic skill development classes nationwide. The study cited that "tutor training is the best programmatic predictorof successful college developmental education [basic skill development] programs" (Maxwell, 1993).

A set of national Standards and Guidelinès for Learning Assistance Programs was developed over a six year period as part of the national Council for the Advancement of Standards' (CAS) Guidelines for Student Services/Development Programs. These guidelines, published in 1986, recommended that paraprofessional staff (tutors) should be "trained with respect to helping skills and institutional services and procedures." (Materniak & Williams, 1987).

Statement of the Problem

Many colleges and universities hire adult peer tutors; however, only a few programs provide them with formal training for tutoring (Mohr, 1991). Tutors are usually hired because they have been successful students. A criterion most programs use in tutor selection is a grade of "A" or "B" in the

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course they will be tutoring and/or a faculty recommendation (Maxwell, 1990a). Thus it is often assumed that the tutors can convey their strategies for success to the students they tutor and will gain tutoring techniques with experience. Unfortunately, being successful in their coursework does not necessarily mean they will be successful tutors without training. For example, some tutors, though successful as students, do not utilize efficient study strategies themselves and may need training before they can help the students they tutor become more efficient, effective, and independent as learners (Rings & Sheets, 1991). Other tutors have developed their strategies and metacognitive abilities to the extent that they may be operating on "automatic pilot," that is, at a sub-conscious level, thus being unaware of the strategies they use to be successful. Therefore, these tutors are unaware of the strategies they employ and will need training to be able to consciously assist students in choosing strategies they may need to learn new material (A. L. Brown, 1980; Rings & Sheets, 1991). A third set of tutors may know the strategies they employ in learning new information, may be both effective and efficient learners, and may still not possess the repertoire of strategies needed to help students select the strategies appropriate for their learning needs (Rings & Sheets, 1991).

For the college programs who choose to provide training for their adult peer tutors, little research exists which identifies what topics should be included, which format of presentation is best (orientation session, staff meeting, course, seminar, etc.), or what kind of teaching method is best for tutor training (lecture, discussion, role play, etc.). An International Tutoring Certification Training Program was created by the national College Reading and Learning Association (CRLA, formerly WCRLA) in 1989. Its role was to

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certify post-secondary peer tutor training programs based on their adherence to specific guidelines (Maxwell, 1993). These guidelines (see Appendix A) provide flexibility so that program directors can select appropriate alternatives to meet the general guidelines. Training programs applying for certification must include at least 8 of the 15 topics in their training to meet the certification requirements (one choice is "other").Thus, the possibility exists that two certified programs could select totally different topics to include within their tutor training programs.

Although the International Tutor Certification Program provides a variety of choices from which program directors can meet the needs of their individual programs, such a variety of alternatives means that there may be little, if any, uniformity among the programs they certify. This diversity confounds research design and thus makes research of tutor training among campuses and programs more difficult.

Maxwell (1990a) found that most of the related literature on adult peer tutoring and tutor training for post-secondary institutions was merely descriptive in nature. Case studies or student evaluations of the

tutor or tutoring program were used to measure effects or describe methods or components of tutoring or training programs. The problem is that little empirical research exists which measures the effects of training on adult peer tutors, and none exists which investigates the effects of experience on adult peer tutors in post-secondary institutions. The question posed then is: Do tutors' responses to tutoring situations change as a result of training or experience?

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Purpose of the Study

The literature indicates that receiving tutoring by adult peer tutors makes a positive difference for students in their achievement, self-esteem, and motivation for continuing their education (B. E. Brown, 1981; Irwin, 1980; Maxwell, 1990a). The literature also posits that training for tutors is a critical component of successful tutoring programs (MacDonald, 1993; Materniak & Williams, 1987; Maxwell 1993). Only a few studies have investigated effects of training on the adult peer tutors. None of these studies has investigated the effects of tutoring experience, nor of other independent variables which might impact study results.

Importance of the Study

Though tutoring has been cited as a critical component of successful basic skill development programs at colleges or universities, and training for adult peer tutors has been cited as critical for successful tutoring programs, many programs have no formal training for their tutors (Mohr, 1991; Maxwell, 1990a; Zaritsky, 1989). Some program directors may believe that tutors will gain tutoring expertise through experience alone. Investigators have identified a need for more research in training adult peer tutors.

Training and experience will be discussed as two major independent variables to be investigated for improved tutor competence. What other factors should be examined for possible effects of improved tutor competence? Other factors will be researched in the literature review in Chapter II and will be selected and discussed in Chapter III.

A concern warranting investigation in this study was raised when a researcher-created multiple choice instrument was proposed. The concern

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was whether tutors' abilities to recognize and select the appropriate response might be different from their abilities to create an appropriate response.

Research Questions

1) Does tutor training affect a tutor's ability to identify an appropriate course of action with a student?

2) Does tutoring experience affect a tutor's ability to identify an appropriate course of action

with a student?

3) What other factors contribute to a tutor's ability to identify an appropriate course of action with a student?

4) What are the relationships between the tutors' abilities to identify an appropriate course of action and their abilities to construct an appropriate course of action?

Definitions of Terms

Appropriate course of action
-the response choice which most closely matches the choices identified by field experts as the "most appropriate" on both researcher-created instruments described below (TSORA and TSFRA).

Learning Assistance Center
-the center providing tutorial services; a variety of other names are also used for the center providing tutorial services; these include Learning Center, Learning Enhancement Center, Math Lab, Writing Center, Information Commons. For the purposes of this paper, the center providing tutoring will be called the Learning Assistance Center.

Learning Assistance Center Directors
-the formal tutor supervisory position. Some colleges participating in the study use other titles for the tutor supervisory position (i.e., lead teacher, office

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supervisor, technician, or coordinator). In this study, the tutor supervisory positions will also be referred to as directors or program directors.

Training
-a formal session or set of sessions in which tutors are presented with information on techniques, strategies, or resources to use when tutoring students. It does not include any session or part of a session in which information on operational orientations is provided, i.e., information dealing with procedures, deadlines, or paperwork. In this study, training is used synonymously with tutor training.

Tutoring experience
-the number of hours a tutor has actually tutored students.

Tutor Situational Free Response Assessment (TSFRA)
- the researcher-created instrument used to assess tutors' created responses to presented tutoring situations (see Appendix C)

Tutor Situational Objective Response Assessment (TSORA, pronounced *soar-a*; the *t* is silent)
- the researcher-created and expert-ranked instrument used to score tutors' chosen responses to

presented tutoring situations (see Appendix D).

Tutors

-adult peer tutors who are hired because of content knowledge and success in the subject area, either through superior coursework or work experience. Though they may have some background or interest in teaching or in education, this background or interest is not a hiring criterion. Often adult peer tutors are currently students themselves and may have recently completed the course(s) they have been hired to tutor. For the purpose of

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this study, peer tutors, study participants, and tutors will be used as synonymous terms for adult peer tutors.

Organization of the Manuscript

Chapter I contains the introduction of the topic of the dissertation, including background, a statement of the problem, the purpose of the study, the importance of the study, research questions, definitions of terms, and the organization of the manuscript.

Chapter II is a synthesis of the literature reviewed, beginning with a brief history of tutoring. Constructivism and metacognition provide the theoretical foundation which establishes the need for training adult peer tutors. The chapter concludes with a review of research on tutor training.

In Chapter III, the hypotheses and the methodologies are presented which were used to design the study, to create the instrument, and to collect the data.

Chapter IV consists of the presentation of descriptive data of the sample, the statistical analysis of the hypotheses, and an exploration of the relationship between identifying and constructing appropriate courses of action.

Chapter V summarizes the study, states conclusions, and discusses recommendations.

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CHAPTER II

REVIEW OF THE LITERATURE

This literature review will provide a brief history of tutoring and a brief overview of constructivism and metacognition as a theoretical foundation and justification for providing training to adult peer tutors. Current research and related studies on training for adult peer tutors will be reviewed, followed by a brief summary of the chapter.

History of Tutoring

Throughout recorded history, tutoring is referenced as a means for the wealthy to assure that their progeny gain the important knowledge required by that generation (P. C. Stahl, N. A. Stahl, & Henk, 1983). In this sense, tutoring by a private tutor has historically been positively associated with being for the elite and wealthy. Conversely, until recently, tutoring received in colleges and universities had been associated with a lack of success (Maxwell, 1990a). The first formal reference to tutoring in colleges and universities occurred when Harvard opened its doors in 1636 as described by Maxwell (1979). Many of the children of the Commonwealth could not read or speak Latin. As Harvard, at that time, required all its students to speak only Latin while within its halls, Harvard provided Latin tutors for these students. According to Dempsey (1979b), it was the nineteenth century before English was studied at the universities, first at a preparatory program now known as New York University. Shortly thereafter, the founding president of Wesleyan University called for the study of English in place of the traditional Greek and Latin.

During the latter part of the nineteenth century and the early part of the twentieth century, the purpose for and access to higher education

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changed dramatically. Two major changes occurred 1) when Gallaudet College, originally named Columbia Institute for the Deaf, was established in 1857 with federal assistance; and 2) when President Lincoln signed the Morrill Act in 1862 which established land-grant colleges. Gutek (1986) notes that, during this period, national economic growth and development were related to educational innovation and development. Following the Civil War, Howard University was established to provide higher education opportunities for the newly freed slaves. In 1901, the first junior college, Joliet Junior College was established in Illinois. It provided post-secondary credits that could be transferred to the university, as well as vocational programs (Gutek, 1986). According to Maxwell (1979), students not meeting the entrance requirements were admitted to colleges and universities because

of the fierce competition for students. In 1907, over half of the students enrolled at Harvard, Yale, Princeton, and Columbia failed to meet entrance requirements. Colleges and universities responded to the needs of a larger and more diverse student population by providing preparatory programs or courses in "How to Study."

In 1947, Harvard's Bureau of Study Counsel offered a formal tutoring program and a reading course as its two services to students (Walker, 1980). During the 1950's, there was a change in the focus of tutoring and other services for students. The change was from strictly content-centered services toward more student-centered services (Walker, 1980). Until the 1960's, tutoring at colleges and universities was poorly documented as it was mainly provided privately or as informal services offered by faculty or honor society

students. Beginning in the 1960's, colleges and universities received government aid to provide higher education to low-income groups, especially

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women and minorities, who were underprepared to enter college. Thus, colleges and universities began to establish learning assistance or tutorial services to provide formal tutoring services for the disadvantaged and minority students (Maxwell, 1979).

In California in 1972, funds were approved for an innovation in providing tutoring and other support services following a unique model which "mobilized" community and campus resources to provide what Frank Christ (1980) described as "a facility...where learners, learner data, and learning facilitators are interwoven into a sequential, cybernetic, individualized, people-oriented system to service all students (learners) and faculty (learner facilitators) of any institution for whom learning by students is important." This innovation changed the goals and focus of tutorial support at colleges and universities. Instead of providing services to special populations only (as a stigma, focusing only on weaknesses), this innovation expanded tutorial and other instructional support services to all, including the staff, faculty, and administration of the college or university.

In the summer of 1972, Stanford opened a Learning Assistance Center aimed at providing service to students who had the potential to succeed at college but who needed some remedial support to realize this potential. Within its first year, other students wanting to enrich their learning skills also made use of the Learning Assistance Center services, and thus these services were expanded to provide assistance for all students (Walker, 1980). The growth of learning assistance or tutorial programs flourished through the 1970's. By the end of the 1970's, more than 75% of the public colleges and universities provided learning assistance programs (Dempsey, 1979b; Devirian, Enright, & Smith, 1975).

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In the late 1970's, Harvard's Bureau of Study Counsel had grown to provide expanded services each semester that included: providing tutoring for three to four hundred students, mainly in mathematics and science classes; teaching reading improvement classes for five to six hundred students; providing individual counseling for over a thousand students, and offering a lecture series entitled "Seminars on University Experiences" to all in the freshman class (Walker, 1980). Stanford University provided tutoring for its students because "even the best and brightest students can often benefit from tutoring in reading, writing, math and study skills that will help them with their university level coursework" (Walker, 1980).

Maxwell (1990a) noted that almost all colleges and universities provided students with some form of tutoring: 1) some provided free tutoring to all students needing it, 2) while others limited free tutoring to those students who qualified for special programs, and 3) still others required fees from all students receiving tutoring.

Theoretical

Historically, there has been a need for providing tutors to supplement instruction for college students. In addition to academic gain, the emphasis today is on tutors helping students become self-directed or independent learners (Hartman, 1990). Training can "provide tutors with the information, strategies, and

resources to help students become independent learners and attain their educational goals" (Rings and Sheets, 1991). Grounded in a theoretical framework of constructivism and metacognition, training can provide tutors with the problem-solving and self-monitoring strategies needed to empower students to accurately construct new information into their knowledge bases. Together, constructivism and

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metacognition build a foundation from which tutors can receive training to help students assess their own needs, identify needed strategies, and evaluate effectiveness in learning new information.

Constructivism, as a theory, provides a theoretical framework for both training and tutoring. Constructivism is the theory that all knowledge is constructed. Knowledge is not an entity that can be transmitted in a pure form and received and interpreted in exactly the same form; rather, knowledge is a process by which a person receives and constructs an interpretation of information. This information is received within the person's own framework of understanding or "fit" of the new information. According to Blais (1988), constructivists perceive education as a process that transforms a novice into an expert. Likewise, tutors, usually hired because of their mastery of subject area content or study skills, are expected to help novices (students) move towards mastery of content.

As identified by Glasersfeld (1989b), the term *constructivism* is a recent term used to describe concepts that can be traced back more than a quarter of a millennium. Giambattista Vico is often credited with the earliest recorded idea of constructivism. In 1710, Vico had a treatise published in which he referred to knowledge as being constructed. Others noted as following constructivist views include Immanuel Kant, David Hume, Silvio Ceccato, John Dewey, and Jean Piaget. Piaget's writings spanned more than 50 years. In his early writings, he is credited with providing foundations for cognitive psychology; in his later works, he is viewed as a constructivist.

In constructivism, experience provides the basis for gaining new knowledge. New experiences are interpreted through a filter consisting of what the learners believe to be real and true. If the new information is

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inconsistent with existing experience and beliefs, the learners may reject it, explore it, distort it so that it "fits" their views, or ignore it (R. J. Stahl, 1990a). New ideas, information, or concepts cannot simply be transferred from one person to another as is often assumed. However, without an adequate schema for the new information (R. J. Stahl, 1992a), the learner may construct completely or partially inaccurate knowledge or may construct something accurately, but not what was intended. Learning is described as a dynamic, active, problem-solving process in which existing knowledge is modified, added to, or reconstructed. Constructivists see the learners' reality as changing to reflect an expansion of knowledge (R. J. Stahl, 1989, 1992a).

Kamii (1982b) likens the traditional perception of education to empty vessels run along an assembly line waiting to be filled with the same pre-measured amounts of the same information thus producing identical products. According to constructivist theory, learning cannot be assumed to have occurred simply because information was presented and individuals listened and said they understood. They may have understood part of it, none of it, or may have totally misunderstood what was intended. Then, as new information is

presented, individuals will try to make it "fit" within their view of reality. Thus, receivers (learners) need to have or be provided with appropriate background information to accurately understand and construct what the sender (instructor or tutor) intends (Kamii, 1982b).

An analogy by Flavell (1985) regarding the construction and reconstruction of new information into memory is to that of an archeological reconstruction of an ancient civilization. The archeologists begin with the individual fragments and artifacts that have been found and are believed to be connected. The archeologists then fill in gaps in knowledge with logical

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inferences based on their knowledge of the civilization. What individuals learn and remember is constructed based on how well it "fits" with previous experience and understanding. "We most emphatically do not simply take mental photographs of inputs at storage and then simply develop them at retrieval" (Flavell, 1985, p. 215). He also states that constructivists believe that spontaneous inferences and interpretations are constantly occurring in the processing, storing, and retrieving of information.

In discussing comprehension and recall from prose, Spiro (1980, p. 246) states "Constructed meaning is the interactive product of text and context of various kinds including linguistic, prior knowledge, situational, attitudinal, and task context, among others." Meaning does not reside in individual words, sentences, or passages; instead language provides us with a skeleton from which to build. Thus the same word or set of words can have different meanings to different learners. Meanings are constructed based on learners' experiences and prior knowledge, attitudes, interests, as well as the context of the task, which includes learners' perceptions of the task and of the reason for or importance of the task. The learners become active rather than passive participants in their learning even while reading to learn new information (Spiro, 1980).

According to Narode (1989), metacognition is grounded in constructivist theory, and it provides the foundation upon which students can construct new information. Metacognition, a term credited to John Flavell, is defined by Flavell as "the active monitoring and consequent regulation and orchestration of [thinking and learning activities]" (cited in Krueger, 1986, pp. 16-17). Narode (1989) applies metacognition to a college setting in which students in lower-level algebra classes need to be provided with problem

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solving opportunities to help them develop critical thinking skills in applying mathematics, as opposed to the traditional focus on computational skills in "remedial" mathematics courses.

Hartman (1990) identifies two dimensions of metacognition in relation to helping students become self-directed learners: 1) Learning metacognitively involves executive management of learning through planning, monitoring, and evaluating; and 2) metacognition involves strategic knowledge of the repertoire of knowledge and skills the student has, when and why these skills are appropriate to use, and how to apply the selected knowledge and skills. "The final aspect of a self-directed learner concerns transfer. It emphasizes application of knowledge and skills across a range of contexts: within the same subject, across subjects, to everyday life experience, and to students' future goals." (Hartman, 1990, p.3). She also states that the goal of tutor training grounded in metacognition is to "prepare tutors to tutor themselves out of a job" (Hartman, 1990, p.2), which she describes as empowering students to become their own tutors.

One aspect of metacognition, termed comprehension monitoring, is defined by Weinstein & Rogers (1985, p.7) as "an active learning strategy necessary for success in any learning situation, but especially in cases where the learner is primarily responsible for his or her mastery of a task." Thus tutors can help students learn and master strategies and skills for dealing with content. Metacognitive strategies can help tutors monitor their own understanding of the students' needs and can help the tutor select an appropriate course of action in helping students construct and reconstruct new information appropriately.

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Empirical Studies and Related Research

Constructivism and metacognition provide a theoretical framework for the training of tutors. Tutors can be provided with instruction in awareness of metacognitive strategies that can be used to help students become more effective and efficient independent learners. Metacognitive awareness of their own learning needs, selection of strategies, and evaluation of the effectiveness of their learning places students in charge of their own learning as they move from novices to masters of new information.

The remaining sections of this chapter will move from the theoretical constructs to focus on the literature regarding specific aspects of this study. It is divided into three parts: 1) the need for tutor training; 2) the topics for tutor training; and 3) the effects of training on tutors.

The Need for Tutor Training

In her article, "Factors affecting the tutoring process," Hartman (1990) called for more research and attributes the dearth of research on the tutoring process for adult students to a lack of a solid theoretical foundation. In her review of research, she analyzed internal and external factors affecting the tutoring process. Internal factors were the cognitive and affective characteristics of both the tutor and the student tutored. External factors were comprised of variables in the academic context and the environment outside the academic setting. Drawing from "Characteristics of a self-directed learner" as described by Barrows (1988), Hartman (1990) identified the role of tutoring as both facilitating academic gain and empowering students to become self-directed or independent learners. The affective factors characteristic of an independent learner identified by Barrows and described by Hartman include: self motivates, builds self-confidence, values learning,

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feels control over educational destiny, regulates self-messages, and persists. The cognitive factors include: plans work, monitors and evaluates comprehension, uses feedback to improve performance, and knows when, why, and how to use knowledge and skills. The outcomes identified by Barrows (1988) are the student's ability to retain, apply, and transfer knowledge and skills to existing and new situations (Hartman, 1990). Thus, training is needed to enable tutors to model and guide metacognition so their students can become independent learners who are aware of their own needs, identify strategies to employ, and take responsibility for evaluating their level of comprehension.

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Rings and Sheets (1991) identified both student development and metacognition as theoretical foundations for providing tutor training. Student development challenges students to become autonomous, self-directed learners. Metacognition enables students to attain that goal by monitoring their own status regarding and progress toward becoming self-directed learners. Training for tutors is needed because tutors 1) may not have efficient study strategies, 2) may have developed their strategies and metacognitive abilities to the point that they may be operating on a sub-conscious level, thus being unaware of the strategies they use, or 3) may be both effective and efficient learners, knowledgeable about the strategies they employ, and may still not have the repertoire of strategies needed to help students select the learning strategies appropriate to their own learning needs. In all three scenarios, tutors need training to be able to model and guide their students in the use of metacognitive strategies (Rings & Sheets, 1991).

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In her paper discussing training for peer tutors for college writers, Draper (1979) used the analogy that a lack of training may be "allowing the blind to lead the blind (or in some cases the arrogant leading the unknowing)." Condravy (1992), in citing several studies, identified the need for training because "simply placing two students together, one of whom has demonstrated better academic achievement, will not guarantee that effective tutoring will occur." She also stated that without training, the tendency is for tutors to take on a more traditional hierarchical role of surrogate instructor using mainly a lecture mode instead of a more collaborative role. Maxwell (1990a) identified results of studies that indicated that tutors and students being tutored used different criteria for judging the success of a tutoring session. Tutors tended to feel more successful in an information giving role where less problem-solving occurred whereas students receiving tutoring felt more successful in sessions with more problem-solving and more collaborative efforts.

Though training for tutors has been identified in the literature as a critical component of tutoring programs, many programs still provide little or no formal training for their tutors. In a study conducted at two- and four-year institutions in New York, Zaritsky (1989) found that 96% of those responding to a survey (N=60) identified that they provide training. However, 25% responded that the total time for training was less than three hours, and 43% reported that they provided between three and five hours of training. She concluded that programs providing training to tutors often do not provide adequate training. Maxwell (1990a), in her review of the literature on tutoring, found that many tutoring programs lack the funds to provide "more than a brief orientation program and a set of guidelines."

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In an investigation measuring the effectiveness of training in improving tutor interpersonal behaviors, Williams (1980) measured three aspects: 1) the change in the tutor behavior, 2) the transfer of the behavior to "live" tutoring situations, and 3) the effect on the learner as a result of the change in interpersonal skills. Her conclusions were that even though levels of improvement were not as high as expected, there was improvement in the tutors' interpersonal behaviors and that those changes did transfer to "live" tutoring situations. The changes in students as a result of changes in tutors' behaviors were not consistent, though the researcher noted indications of a trend towards improvement. The contention is that training tutors in communication skills is critical to providing appropriate tutoring services for students. Van (1992, p. 33), in her study of successful college learning assistance programs, notes, "Successful programs train tutors in teaching strategies, interpersonal skills, and self-esteem development."

In a published discussion with the authors of three papers on training programs for tutors (Beck, 1978; Hawkins, 1978; Silver, 1978), Bruffee (1978b) made the statement that existing research suggests that the success of a peer tutoring program hinges not only on providing training, but on how the tutors are trained. Training programs will be different depending on differing institutional needs. Two of the differences in the three training programs Bruffee referenced were topics of training for tutors and the amount of training received.

Topics of Training Programs

Once the need for training has been established, the questions become how much training and what topics should be included in the training for tutors. Decisions about the training should be made to meet individual

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program needs (B. E. Brown, 1981). The content of the tutor training should include decisions about the role that the tutor is expected to play, which can vary dramatically from institution to institution. Once the decision is made, that role should be clearly defined to the tutors, faculty, and students at the institution. In addition to the tutor's role, B. E. Brown (1981) also feels that decisions should be made about 1) the need to teach tutors content specific skills; and 2) the emphasis between expertise in subject matter versus expertise in study skills. The model he discusses identifies seven topics to be included in tutor training programs: subject expertise, teaching strategies, diagnosis, student characteristics, human information processing, study skills and policies and procedures.

"Tutors frequently equate talking with teaching, and listening with learning" (B. E. Brown, 1981, p. 78), a stereotype that seems logical given their experiences in traditional classroom settings. He also suggests that training should be provided for defining learning and identifying student needs. Ashton-Jones (1988) identifies the defining of the role of the tutor and helping peer tutors understand that role as crucial for a tutoring program. She states that even though tutors may work to establish peer relationships, often they will fall back into the traditional and well-learned hierarchical role of a teacher lecturing. She cites both Bruffee's reference to tutors becoming "little teachers" (Ashton-Jones, 1988, p. 30), and Hawkins' cautions against tutors who view themselves as "shaman, guru, or mentor" rather than as "architects and partners of collaborative learning...shifting the responsibilities of learning onto the learner" (Ashton-Jones, 1988, p. 31). Ashton-Jones recommends that tutors be engaged in conversation as much

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as possible in training situations. Modeling problem solving and session planning are major facets of training that she proposes.

Modeling problem solving is the focus of what Mills (1982) referred to as a research-based tutor training program. She states that her training program is based on problem-solving research. Tutors and their students share the role of "expert." First, the tutor models by verbalizing the thought process and details the steps involved in solving a problem while the student listens; then the roles are switched. Each has an opportunity to play each role, thus becoming partners in the learning process. This approach also promotes training in definition of the tutor role, communication skills, and session planning.

To evaluate the success of a tutor training program at North Carolina State University, Mills (1982, p. 25) studied "the Fall 1980 population of all Special Services' students" for a comparison of the percentages of students who failed courses between those "using tutoring on a regular basis" and those who did not. The comparisons were made for English, math, and chemistry courses (see Table 1). Group A did not receive "tutoring on a regular basis" whereas Group B did receive tutoring "on a regular basis."

As shown in Table 1, 50% of Special Services' students who did not receive tutoring on a regular basis failed chemistry, whereas none of the Special Services' students who received tutoring on a regular basis failed chemistry. The author concluded "Students who receive tutoring by the modeling method do better in their subsequent courses than those who do not receive tutoring."

Unfortunately, few details were provided regarding the specifics of the design of the study or of the findings. No information was provided on the number of students participating, whether any students are counted more

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than once in the percentages among subject areas, the criteria used for determining the prediction that the student would not succeed, nor the criteria for "students receiving tutoring on a regular basis." Students receiving tutoring by tutors modeling problem-solving was presented as the intervention responsible for fewer students failing the course. Other potential independent variables were not considered, such as, the experience of the tutor during the semester, the use of tutors who received no training, the amount of training tutors received, nor the tutor's prior knowledge and experience. It is also unclear whether the sample included students in different classes with different instructors within each subject area reported.

Another topic identified in the literature is the importance of the tutor planning and setting goals for tutoring sessions. In a qualitative study of group tutoring techniques, MacDonald (1993) presented the implications for use in actual tutoring situations. He discussed the importance of training tutors, and suggested an activity for training that incorporates the following topics: the tutor's role, setting goals and expectations, and modeling problem-solving skills. In the study, MacDonald interviewed 37 tutors from three colleges, categorized the concepts of the interviews, and then validated those concepts with research from which he could draw conclusions. He then offered recommendations for training tutors. On the basis of existing research on group dynamics and on information tutors provided in the interviews, MacDonald developed five categories related to providing group tutoring: 1) Tutor and tutee roles and group cohesion, 2) Identifying students' needs, 3) A workable plan and time line, 4) Jumpstarting, and 5) Floor management. Two general implications for the training of tutors were identified. The first implication for training

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Table 1

Reported Comparison of Percentage of Failures Within Groups by Course

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English Math Chemistry

Group A: Percentage of Special Services students not receiving tutoring on a regular basis who failed:	20.0%	33.5%	50.0%
Group B: Percentage of Special Services students receiving tutoring on a regular basis who failed:	4.2%	14.5%	0.0%

was that "tutoring is a complex, interactional task that can be improved by training" (MacDonald, 1993, p.16). Therfore, the need is to train tutors to train the students with whom they work, so that the students will be empowered to change their learning behaviors and become independent learners. The second implication for training was the need for specific recommendations for practitioners to follow when training tutors to work with groups of students. A training module was described in detail. MacDonald has clearly stated the need for specific topics in training to address specific needs for tutors to apply in tutoring sessions.

Condravy (1992) describes a tutor training program she developed called "Learning together: An interactive approach to tutor training." She cited research and articles that support the activities and topics she has chosen to include in her program. She reviewed the topics she had chosen, using the results of author-created evaluation forms which elicited tutors' perceptions of the training they had received. These results were collected over a ten year period. The evaluations use a three-point rating scale for the first 17 items and include two open-ended questions. She also reported results from student evaluations that use a six-point scale to rate tutoring services. The training topics she chose included tutor roles, active listening, and study skills. She also described specific training activities to present the topics selected.

Effects of Training on Tutors

Only three studies attempted to measure the effects of training on adult peer tutors (Brandwein & DiVittis, 1985; Williams, 1980; Willis & Gueldenpfenning, 1981). Willis and Gueldenpfenning (1981) investigated differences in tutor behaviors based on the methods used to train the tutors

(lecturing, modeling, and role playing). The groups studied were those receiving training through 1) lecturing (N=3), 2) modeling (N=4), and 3) role-playing (N=4). Seven tutoring skills (specifying, signaling, recognition, reinforcing, correcting, data collecting, and enthusiasm) were identified. These seven skills were taught in eight half-hour training sessions or units. Tutors were assigned to one of the three groups and given outlines of the remaining sessions during their first session of training. The tutors were evaluated

by means of a five minute videotaped tutoring test on the last seven units, for which they were to respond to realistic, but simulated, tutoring situations.

One minute of the five minutes of the taped tests of each skill was scored for each tutor. The chosen minute was randomly selected for each of the eight sessions, and each tutor was scored on the same minute of the five for that session. (Note: The last skill of enthusiasm was not scored due to a lack of the rater's ability to identify it as a behavior.) The appropriate and inappropriate behaviors were the dependent variables. Reliability was computed and ranged between 85% and 100% on appropriate behaviors (with a mean of 96%) and was 100% for inappropriate behaviors. The first unit provided no training and was used as a baseline to assess differences between groups; no significant differences were found.

Gains were identified for all groups. Significant differences were found among the three groups. The group that received lecturing had the lowest post-test mean and the lowest gain between pre-training and post-training scores. Modeling fell in the middle, and role-playing had the highest post-test score and the highest gain in scores. The differences between the first session and the last were significant for all groups.

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Willis and Gueldenpfenning (1981) state that generalizations must be made cautiously because of 1) the specialized sample (full-time undergraduates serving as tutor trainees from one institution, 2) the size of the sample (N=11), and 3) the use of a simulated environment.

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designed a study to determine if tutor training would improve the relationship between the tutor and the student so that learners would attain higher levels of success and have a higher completion rate. She completed one major pilot study and two small experimental follow-up studies. In her pilot study, 72 part-time tutors who provide long distance tutoring by telephone were invited to participate; only 31 expressed an interest in the pilot study. Three tutors were asked to serve as a control group, and after several others of the 31 interested tutors dropped out for various reasons, only 13 actually participated in the pilot study to varying degrees. Only five tutors completed all aspects of the pilot study: 1) the training, 2) the pre- and post-written tests, 3) the workshop evaluation, and 4) the pre- and post- training audio tapes of the telephone tutoring session.

The pre- and post-tests elicited responses from the participants describing how they would handle certain situations in tutoring. Their responses were rated from 5 (very effective) to 1 (very ineffective) in three areas: 1) ability to communicate understanding of student perspective, 2) ability to constructively communicate own perspective, and 3) level of sophistication of a tutoring strategy. In addition, participants made a five minute recording of a tutoring session before beginning training and were asked to make three additional recordings, one recording of a session of their choice in each of the following three months. These taped tutoring sessions

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were evaluated using an observer and an observation code. One minute was randomly selected, and that minute was scored for each tape on four areas: 1) the ratio of tutor and student talk, 2) direct or indirect

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methods, 3) demonstration of the presented tutoring skills, and 4) facilitative conditions (e.g., display of empathy, respect, and genuineness).

Williams noted that when reviewing the taped sessions it was evident that even though students desire to talk more in a telephone tutoring session, the untrained tutor is unable to generate a student-dominated conversation. She also noted that untrained tutors may actually detract from more than they add to the distance education learning experience. Thus, it was concluded that tutors did need skills training.

Gains for the pre- and post-tests were found for all trained tutors (N=5) in some areas and for most trained tutors in other areas. She concluded that the training was effective in raising the skill levels of tutors. She also reported that the changes in tutoring behaviors observed during recorded tutoring sessions did translate to live tutoring situations. However, she noted that though there were gains, the level of functioning fell short of minimal standards identified in the research used as a basis for this study. Thus, revisions to the content of the training were noted.

In discussing the results, Williams' conclusions included: 1) tutors at her institution are in need of skills training; 2) tutors are interested in the prospect of learning skills; 3) tutors completing training view it positively; 4) training is effective in providing desired behavioral changes; and 5) gains made in training sessions do translate to live tutoring sessions.

[28]

In this study, problems existed with the sample selection; only 5 out of 72 tutors (7%) completed the whole study. These five tutors self-selected. The reliability of the rating of the taped tutoring sessions was also unclear.

In her two follow-up experimental studies, Williams studied personal and interpersonal skills of trained tutors. The results of both experimental studies were inconclusive. Her final recommendations included the ideas that more research was needed, more tutors should be paid for their training time, and training should focus more on problem-solving.

The third study on the effects of training on tutors (Brandwein & DiVittis, 1985) was designed to develop a model for quantitative analysis of the changes in tutor responses as a result of training. A multiple choice, pencil and paper test was developed based on a content analysis of a peer tutor training course. Ten tutoring situations were presented, and tutors were to select one of the three choices presented for each situation. Each of the three choices was ranked by the course instructor as to its "match" to the concepts of the course. The closest match was rated at "5" points, next closest at "3" points, and the one least like the the model presented in class was rated at a value of "1" point. Each tutor's score was assumed to measure the tutor's adherence to the guidelines presented in the training course, and a further assumption was made that this score reflected the peer tutor's competency as a tutor.

Two groups were identified for comparison. The first group consisted of the 12 tutors who had taken the peer tutoring course during the Spring 1982 term. The second group was reported to be a comparable group of 13 newly hired tutors in the Fall 1982 semester who had not yet received any training. Both parametric (t test) and non-parametric (Mann Whitney U test)

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analyses indicated that the group who received training answered with more desired responses than the second group of newly hired tutors who had not yet received training. Tutors receiving training were also asked to: 1) rate the exercises used in the course, 2) identify the amount of time (in percentages) spent on different skill areas (increasing interpersonal skills, increasing teaching skills, and learning how to teach remedial English and math skills), 3) list their perception of the time (in percentages) that should have been spent in each of the three skill areas in 2, and 4) to rate and self-report their improvement in each of six areas related to their work with students (e.g., math, writing, sensitivity, and communication). The investigators concluded that the peer tutor training program studied was successful because tutors who received training responded in a more appropriate manner to the presented tutoring situations. They also concluded that the instrument enabled them to differentiate between trained and untrained tutors. After a review of the test items, it was noted that only four of the ten items significantly differentiated trained tutors from untrained tutors. Two explanations were offered: 1) the scale is not powerful enough to discriminate between the two groups and 2) untrained peer tutors may initially possess the skills investigated prior to receiving any training. It was stated that future research will need to address the scaling scheme and include tutors with diverse backgrounds.

The above study contained four possible limitations that were not identified: 1) No assessment of knowledge or skills prior to receiving training was made. The two treatment groups were comparable in number of participants (Group 1-tutors hired in Spring semester, N=13 and Group 2-tutors hired in Fall semester, N=12), but the groups' tutoring skills may not

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have been comparable as was assumed. 2) Tutors may also have improved through gaining tutoring experience over a semester. 3) The responseson the instrument were ranked by the person providing the training. Though she was aware of her desired responses, it cannot be assumed other "experts" in the field would completely agree with her ranking, especially when it is also assumed that the scores indicated a level of tutor competency. 4) Though trained tutors were better able to identify a desired answer, no investigations were made to verify that those same tutors could construct a desired response on their own.

Summary of the Chapter

The need for providing tutors to supplement instruction for college students has been identified since Harvard first opened its doors in 1636. Tutors have been needed to provide both content and study strategy supportto help students reconstruct the new information being presented to them in colleges and universities. The emphasis today is on helping students become efficient and effective learners adept at dealing with volumes of new information.

Training for adult peer tutors can be grounded in a theoretical framework of constructivism, in which tutors' metacognitive strategies are used to provide them with the problem-solving and self-monitoring strategies needed to empower students to accurately construct new information into their knowledge base. Together, constructivism and metacognition lay the groundwork for establishing the need, process, and outcomes in providing training to adult peer tutors.

Though providing training for tutors is now being recognized in the literature as a critical component of success for tutoring programs in colleges

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and universities, the process of helping tutors to gain the needed tools and strategies is often overlooked or left to happenstance. Training for tutors should be designed to support the needs of the students and the institution. A set of flexible national guidelines exists which is endorsed by several national organizations. It is the College Reading & Learning Association's International Tutor Certification Program which provides guidelines for topics of training, formats of the training sessions, and amount of tutoring experience needed, as well as tutor selection criteria and evaluation of tutors. The literature supports and calls for more research into the effects of training and tutoring experience on tutors.

On the basis of the review of literature, research on the effects of training tutors should include the following: 1) larger numbers of tutors as participants, as this was a limitation of some of the studies reviewed (one study reported results with 5 tutors, another with 11, a third reported percentages without numbers), 2) investigations of differences in results based on the topics presented in training, 3) pre- and post-intervention assessment of tutor skills of all treatment groups to account for prior knowledge which might impact results, and 4) scoring of researcher-created instruments which is free of researcher biases.

[32]

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Organization/Address: c/o Paradise Valley Community College 18401 N 32nd St. PHX, AZ, 85032	Telephone: (602) 787-6761 FAX: (602) 787-6755
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